UNITED STATES PATENT AND TRADEMARK OFFICE

AS

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,264	07/02/2001	Kiyoshi Kamitani	Q64664	7751

7590 05/16/2002

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
Suite 800
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER
BLANTON, REBECCA A

ART UNIT	PAPER NUMBER
1762	5

DATE MAILED: 05/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MFS

Office Action Summary	Application No.	Applicant(s)	
	09/895,264	KAMITANI, KIYOSHI	
	Examiner	Art Unit	
	Rebecca A. Blanton	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 July 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2, and 3* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2, 4, 7-8, and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogawa et al. (U.S. 5,077,912).

Ogawa et al. discloses a process for drying a photosensitive coating that has been coated on a metal support (column 1 lines 6-10). The reference teaches that the photosensitive coating material is produced by dissolving the material in an organic solvent, which is then coated onto the support (column 1 lines 16-19). In column 1 lines 54-62, Ogawa et al. teach that the coating is dried by first hot air drying the coating so that the coating is set to touch and then further drying the coating by heating roll drying.

Regarding claim 2, Ogawa et al. teach that the hot air is at a temperature of lower than 150°C (column 2 lines 25-27).

Referring to claims 7-8, in column 2 lines 67-68, Ogawa et al. teach that the support is an aluminum web of 0.2mm (200μm) thickness.

Regarding claims 12-13, none of the limitations that the thicknesses and widths of supports supplied to the second heating means continuously change, a condition of heating the supports and photosensitive coated layers by the second heating means changes in accordance with the thicknesses and widths are required by the claims. If

the claim limitations were to be drawn to a process wherein the thicknesses and widths of supports supplied to the second heating means continuously change, the applicant's limitations would distinguish over the prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3, 6, 9-11, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al. (U.S. 5,077,912) as applied to claim 1 above.

Referring to claim 3, Ogawa et al. teach that the coating material is set to touch, meaning that it does not adhere to a finger, after the hot air drying step (column 2 lines 4-10). However, Ogawa et al. do not specifically teach the amount of organic solvent remaining in the coating layer. The amount of remaining solvent is a result effective variable. If the amount of organic solvent remaining in the coating is too high, the coating material will not be set/dry to touch. Therefore, it would have been obvious to

one of ordinary skill in the art at the time the invention was made to determine the amount of solvent remaining in the coating layer after the hot air drying process, taught by Ogawa et al., through routine experimentation, in the absence of unexpected results, and limit the amount of solvent remaining in the coating layer so that the coating layer is set/dry to touch.

Regarding claim 6, Ogawa et al. do not teach using an induction heater to heat the coating. However the heating means for the applicant's claimed process does not appear to be critical. It is commonly known to utilize induction heaters in heating processes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an induction heater to heat the coating taught by Ogawa et al. in view of the knowledge that induction heaters are useful in heating processes.

Regarding claims 9-11, Ogawa et al. do not teach the final temperature of the coating after the second heating means. However, this is a known result effective variable. If the final temperature is too high, the coating may degrade and become unusable. However, if the coating temperature is too low, the coating may not harden appropriately, thereby rendering it unusable. It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine an appropriate final temperature of the coating material after the second heating means, as taught by Ogawa et al., through routine experimentation, in the absence of unexpected results, and to choose a temperature that allows the coating to fully cure without adversely affecting the coating.

Referring to claims 15-16, Ogawa et al. do not teach forcibly cooling the coating after using the heat rollers to fully dry the coating. However, forcibly cooling the coating takes less time than allowing it to cool in the air, thereby reducing processing time, which reduces operation costs. It would have been obvious to one of ordinary skill in the art at the time the invention was made to forcibly cool the coating after it had been heat dried, as taught by Ogawa et al., in order to shorten processing time of the coated support.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al. (U.S. 5,077,912), as applied to claim 1 above, in view of Gandini et al. (U.S. 6,270,938).

Regarding claim 17, Ogawa et al. does not teach further processing the coated support by including an overcoat layer on the photosensitive coating. However, Gandini et al. teaches that the additional application of an overcoat layer is advantageous (column 10 lines 44-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made in the absence of a teaching of Ogawa et al. as to further treating the coated support after the drying process to look to prior art for additional treatments of the coated support and to use the teachings of Gandini et al. that an additional application of an overcoat is advantageous.

Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al. (U.S. 5,077,912), as applied to claim 1 above, in view of Kojima et al. (U.S. 5,380,612).

Ogawa et al. disclose a process for drying a coating on a support, as described above. Additionally, Ogawa et al. disclose that the coated support can be dried by blowing hot air, irradiation of infrared light, or radiant heat plates (column 1 lines 19-23). However, Ogawa et al. does not disclose this as the method for the second drying step. Kojima et al. teach that the means for heating the coated support are infrared heaters, panel heaters, or heat rollers. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use either an infrared heater or radiant heat plates for the second drying step of the coating taught by Ogawa et al., in view of the teachings of Kojima et al. that heat rollers are equivalent to infrared heaters and radiant heat panel heaters.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rebecca A. Blanton whose telephone number is 703-605-4295. The examiner can normally be reached on M - F (7:30am - 3:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on 703-308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

rab RJB
May 13, 2002

MICHAEL BARR
PRIMARY EXAMINER